

AMENDMENTS TO THE CLAIMS

1-8. (Canceled)

9. (Currently amended) A ~~[[host]]~~ zebrafish cell transformed with a reporter nucleic acid comprising a ~~[[first]]~~ DNA segment consisting of nucleotides 3005-4336 of SEQ ID NO:1 contiguous to nucleotides 1-243 of SEQ ID NO:1, ~~or a second DNA segment which is at least 80% identical to said first DNA segment across nucleotides 3005-3484 of SEQ ID NO:1 and having the same reporter and mRNA terminator function as said first DNA segment.~~

10. (Currently amended) ~~The host cell of Claim 9 which is a~~ A zebrafish cell comprising a reporter nucleic acid comprising a DNA segment which is at least 98% identical to and having the same reporter function as nucleotides 3005-4336 of SEQ ID NO:1 contiguous to nucleotides 1-243 of SEQ ID NO:1.

11. (Currently amended) A transgenic zebrafish comprising a reporter nucleic acid comprising a ~~[[first]]~~ DNA segment consisting of nucleotides 3005-4336 of SEQ ID NO:1 contiguous to nucleotides 1-243 of SEQ ID NO:1, ~~or a second DNA segment which is at least 80% identical to said first DNA segment across nucleotides 3005-3484 of SEQ ID NO:1 and having the same reporter and mRNA terminator function as said first DNA segment.~~

12. (Original) The transgenic zebrafish of Claim 11 which further comprises an induced mutation.

13. (Previously presented) The transgenic zebrafish of Claim 12, wherein the mutation has been induced by chemical mutagenesis.

14. (Previously presented) The transgenic zebrafish of Claim 12, wherein the mutation has been induced by insertional retrovirus mutagenesis.

15. (Withdrawn) A method for identifying a gene that modulates the β -catenin signaling pathway which comprises:

analyzing the level of expression of the reporter nucleic acid contained in a transgenic zebrafish of Claim 11 which also comprises an induced mutation;

analyzing the level of expression of said reporter nucleic acid contained in a control transgenic zebrafish without said mutation;

comparing the levels of expression of said reporter nucleic acid to identify zebrafish with said mutation having an altered level of expression of said reporter nucleic acid; and

identifying the gene containing the induced mutation.

16. (Withdrawn) A method for identifying a gene that modulates the β -catenin signaling pathway which comprises:

analyzing the level of expression of the reporter nucleic acid contained in a transgenic zebrafish of Claim 30 which also comprises an induced mutation;

analyzing the level of expression of said reporter nucleic acid contained in a control transgenic zebrafish without said mutation;

comparing the levels of expression of said reporter nucleic acid to identify zebrafish with said mutation having an altered level of expression of said reporter nucleic acid; and

identifying the gene containing the induced mutation.

17. (Withdrawn) A method for identifying a gene that modulates the β -catenin signaling pathway which comprises:

analyzing the level of expression of the reporter nucleic acid contained in a transgenic zebrafish of Claim 32 which also comprises an induced mutation;

analyzing the level of expression of said reporter nucleic acid contained in a control transgenic zebrafish without said mutation;

comparing the levels of expression of said reporter nucleic acid to identify zebrafish with said mutation having an altered level of expression of said reporter nucleic acid; and

identifying the gene containing the induced mutation.

18. (Withdrawn) A method for identifying a gene that modulates the β -catenin signaling pathway which comprises:

analyzing the level of expression of the reporter nucleic acid of Claim 7 contained in a transgenic zebrafish which also comprises an induced mutation;

analyzing the level of expression of said reporter nucleic acid contained in a control transgenic zebrafish without said mutation;

comparing the levels of expression of said reporter nucleic acid to identify zebrafish with said mutation having an altered level of expression of said reporter nucleic acid; and

identifying the gene containing the induced mutation.

19. (Withdrawn) A method for identifying a gene that modulates the β -catenin signaling pathway which comprises:

analyzing the level of expression of the reporter nucleic acid of Claim 8 contained in a transgenic zebrafish which also comprises an induced mutation;

analyzing the level of expression of said reporter nucleic acid contained in a control transgenic zebrafish without said mutation;

comparing the levels of expression of said reporter nucleic acid to identify zebrafish with said mutation having an altered level of expression of said reporter nucleic acid; and

identifying the gene containing the induced mutation.

20. (Withdrawn) The method of Claim 15, wherein the altered level of expression is a reduction or loss of expression.

21. (Withdrawn) The method of Claim 15, wherein the altered level of expression is an increase.

22. (Withdrawn) A method for screening a candidate drug that is potentially useful for the treatment or prevention of a disease condition involving a β -catenin signaling pathway which comprises:

analyzing the level of expression of the reporter nucleic acid contained in a transgenic zebrafish of Claim 11 in the presence of a candidate drug;

analyzing the level of expression of said reporter nucleic acid contained in said transgenic zebrafish in the absence of the candidate drug;

comparing the levels of expression of said reporter nucleic acid to identify an altered level of expression of said reporter nucleic acid in the presence of said candidate drug, wherein an altered level of expression of said reporter nucleic acid is indicative of a drug useful for the treatment or prevention of said disease condition.

23. (Withdrawn) A method for screening a candidate drug that is potentially useful for the treatment or prevention of a disease condition involving a β -catenin signaling pathway which comprises:

analyzing the level of expression of the reporter nucleic acid contained in a transgenic zebrafish of Claim 30 in the presence of a candidate drug;

analyzing the level of expression of said reporter nucleic acid contained in said transgenic zebrafish in the absence of the candidate drug;

comparing the levels of expression of said reporter nucleic acid to identify an altered level of expression of said reporter nucleic acid in the presence of said candidate drug, wherein an altered level of expression of said reporter nucleic acid is indicative of a drug useful for the treatment or prevention of said disease condition.

24. (Withdrawn) A method for screening a candidate drug that is potentially useful for the treatment or prevention of a disease condition involving a β -catenin signaling pathway which comprises:

analyzing the level of expression of the reporter nucleic acid contained in a transgenic zebrafish of Claim 32 in the presence of a candidate drug;

analyzing the level of expression of said reporter nucleic acid contained in said transgenic zebrafish in the absence of the candidate drug;

comparing the levels of expression of said reporter nucleic acid to identify an altered level of expression of said reporter nucleic acid in the presence of said candidate drug, wherein an altered level of expression of said reporter nucleic acid is indicative of a drug useful for the treatment or prevention of said disease condition.

25. (Withdrawn) A method for screening a candidate drug that is potentially useful for the treatment or prevention of a disease condition involving a β -catenin signaling pathway which comprises:

analyzing the level of expression of the reporter nucleic acid of Claim 7 contained in a transgenic zebrafish in the presence of a candidate drug;

analyzing the level of expression of said reporter nucleic acid contained in said transgenic zebrafish in the absence of the candidate drug;

comparing the levels of expression of said reporter nucleic acid to identify an altered level of expression of said reporter nucleic acid in the presence of said candidate drug, wherein an altered level of expression of said reporter nucleic acid is indicative of a drug useful for the treatment or prevention of said disease condition.

26. (Withdrawn) A method for screening a candidate drug that is potentially useful for the treatment or prevention of a disease condition involving a β -catenin signaling pathway which comprises:

analyzing the level of expression of the reporter nucleic acid of Claim 8 contained in a transgenic zebrafish in the presence of a candidate drug;

analyzing the level of expression of said reporter nucleic acid contained in said transgenic zebrafish in the absence of the candidate drug;

comparing the levels of expression of said reporter nucleic acid to identify an altered level of expression of said reporter nucleic acid in the presence of said candidate drug, wherein an altered level of expression of said reporter nucleic acid is indicative of a drug useful for the treatment or prevention of said disease condition.

27. (Withdrawn) The method of Claim 22, wherein the altered level of expression is a reduction or loss of expression.

28. (Withdrawn) The method of Claim 22, wherein the altered level of expression is an increase.

29. (Withdrawn) The method of Claim 22, wherein said disease condition is melanoma, colorectal cancer or osteoporosis.

30. (Canceled)

31. (Currently amended) ~~[[The]]~~ A transgenic zebrafish comprising a reporter nucleic acid comprising a DNA segment which is at least 98% identical to and having the same reporter function as nucleotides 3005-4336 of SEQ ID NO:1 contiguous to nucleotides 1-243 of SEQ ID NO:1 of Claim 11 wherein the reporter nucleic acid comprises said second DNA segment.

32. (Previously presented) The transgenic zebrafish of Claim 31 wherein a nucleic acid sequence encoding a wild-type GFP or a sequence having at least 98% identity to said wild-type GFP replaces nucleotides 3485-4330 of SEQ ID NO:1.

33. (Previously presented) The transgenic zebrafish of Claim 31 wherein the nucleic acid encoding a wild-type GFP consists of the nucleotide sequence set forth in SEQ ID NO:2.